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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,570	05/29/2001	Shinobu Ozeki	109663	3660

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
POON, KING Y	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/865,570	OZEKI ET AL.	
	Examiner	Art Unit	
	King Y. Poon	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 6, 8, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al (US 5,872,869) and Shang (US 5,077,817).

Regarding claims 1: Shimizu et al. teach a multifunction system comprising: an image output unit (the first system/image processing apparatus of column 3, lines 47-53, fig. 1) that has an image signal input unit capable of receiving an optical signal (70, fig. 2), and outputs an image according to an optical signal inputted from the image signal input unit (column 6, lines 38-45, the signal input unit of the first apparatus that received image signal from other system through optical fiber, and print the received image, column 7, lines 20-33); a first functional unit (the second system/image processing apparatus of column 3, lines 47-53, fig. 1) that has a first optical signal output unit (70, fig. 2) capable of outputting an optical signal and outputs the optical signal according to a first function through the first optical signal output unit (column 7, lines 10-20); a second functional unit (the third system/image processing apparatus of column 3, lines 47-53, fig. 1) that has a second optical signal output unit (70, fig. 2, and the software of controller that controls the outputting of optical signal to other systems

column 7, lines 10-20) capable of outputting an optical signal and an optical signal input unit (70, fig. 2, and the software of controller that controls the inputting of optical signal to other systems column 7, lines 22-34) capable of receiving an optical signal, and outputs an optical signal according to a second function through the second optical signal output unit, and receives an optical signal inputted through the second optical signal input unit, and a distribution-type optical signal transmission medium (optical fiber network, column 3, lines 50-53; note) to which the image signal input unit, the first optical signal output unit, the second optical signal output unit, and the optical signal input unit are connected and which distributes an optical signal outputted from at least the first optical signal output unit to the image signal input unit and the optical signal input unit, and transmits an optical signal outputted from the second optical signal output unit to the image signal input unit (column 3, lines 45-55, column 7, lines 10-35).

Note: Shimizu does not use the phrase "distribution type optical signal transmission medium" to describe his optical fiber network.

Shang disclosed that optical fiber network (column 1, lines 10-20) is inherently a "distribution (column 1, line 14, column 1, lines 35-36) type optical signal transmission (column 2, line 53) medium (allow light to go through, column 2, lines 35-40)" or at least it is well known in the art.

Therefore, it would have been obvious to a person with ordinary skill in the art to use the conventional optical fiber network for the system of Shimizu such that Shimizu's system would be properly functioned.

Regarding claim 2, Shimizu et al, teach the multifunction system according to claim 1, wherein the first optical signal output unit and the second optical signal output unit include a unit that generates plural optical signals of different types, and the image signal input unit and the optical signal input unit include an extraction part that extracts an optical signal of a specific type from inputted optical signals (column 6, lines 38-45, the systems transmit and receive/extract both optical control signals and optical image signals using optical fibers 701, 702, 703 & 704).

Regarding claim 6, Shimizu et al, teach the multifunction system according to claim 2, further comprising: an arbitrating part that arbitrates the respective communications of the image output unit, the first functional unit, and the second functional unit by specifying the types of optical signals to be outputted by the first optical signal output unit and the second optical signal output unit, and the types of optical signals to be extracted by the image signal input unit and the optical signal input unit (column 6, lines 38-45, system transmits and receives/extracts control signals and image signals using optical fibers 701, 702, 703 & 704, furthermore, column 5:lines 32-39, signal lines 136 and 139 connect the CPU circuit block 10 to the optical fiber interface 70 for enabling the control information for input and output signals).

Regarding claim 8: Shimizu teaches wherein the image output unit comprises a printer (column 3, lines 49-50), the first functional unit comprises an image reading device (column 3, lines 49-50), and the second functional unit comprises at least a storage part (20, 90, fig. 2) that stores a signal inputted from the optical signal input unit, wherein the first functional unit outputs an optical signal in accordance with an image to

be printed (column 7, lines 10-35), the second functional unit stores in the storage part a signal according to the optical signal inputted through the optical signal input unit (column 8, lines 40-45, fig. 2), and outputs the optical signal in accordance with the image through the second optical signal output unit (column 7, lines 10-20); and the image output unit prints the image according to the optical signal inputted from the second functional unit through the image signal input unit (column 7, lines 10-35).

Regarding claim 9, Shimizu et al., teach the multifunction system according to claim 1, further comprising: a third functional unit (the fourth system of column 3, lines 47-53) having a third optical signal output unit, the third optical signal output unit outputting an optical signal according to a third function to the distribution-type optical signal transmission medium, wherein the first functional unit outputs an optical signal to the image output unit through the first optical signal output unit, and the third functional unit transmits an optical signal to the second functional unit through the third optical signal output unit (figure 1 & column 3 lines 22-53, optical signal transmission medium is accomplished through optical fiber cables that network other similar systems)

Regarding claim 10: Shang teaches wherein the distribution type optical signal transmission medium has a plurality of input ports and a plurality of output ports and an input form one of the plurality of the input ports is transmitted to the plurality of output ports (column 1, lines 14-20).

3. Claim 4, 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US 5,872,869) and Shang as applied to claims 1, 2 above and further in view of Hirota et al. (US 5,822,475).

Regarding claim 4, Shimizu et al., teach the multifunction system according to claim 2, but do not teach wherein the plural optical signals of different types are optical signals with different wavelengths.

However, Hirota et al., teach signals of different wavelengths that are transmitted in the optical transmission system (column 3, lines 57-61, transmitting and receiving a plurality of optical signals is accomplished by discriminating them by the wavelength of each signal beam).

Also see column 2,lines 35-40 of Shang.

Accordingly, it would have been obvious to one skilled in the ad to have used the wavelength discrimination transmission system of Hirota et al. and Shang, in the multifunction system of Shimizu et al, because it allows greater control of transmission without the need for a plurality of signal beam propagation layers.

Regarding claim 5, Shimizu et al, teach the multifunction system according to claim 2, but do not teach wherein the plural optical signals of different types are optical signals with different timings of output to the distribution-type optical signal transmission medium.

However, Horita et al., teach a optical transmission system that assigns timing for input and output of optical signals (column 7:line 67-column 8, line 8, timing is used for transmission and receiving each signal).

Accordingly, it would have been obvious to one skilled in the art at the time of the invention to have used the output timing taught by Horita et al., with the multifunction

system of Shimizu et al., because it allows greater control of optical signal transmission in the system.

Regarding claim 7, Shimizu et al., teach the multifunction system according to claim 1, but do not teach the system wherein the distribution-type optical transmission medium comprises a diffusion pad that diffuses an inputted optical signal. However, Hirota et al., teaches an optical transmission medium comprising a diffusion part (column 6:lines 8-24, diffusion occurs within optical transmission layer 21).

Accordingly, it would have been obvious to one skilled in the ad at the time of the invention to have used the diffusion/distribution part taught by Hirota et al., with the multifunction system of Shimizu et al., because (column 3, lines 1-12, Hirota et al.) the optical diffusion portions or optical diffusers diffuse and propagate input signal beams, allowing a signal beam input from a certain signal beam input/output portion to transmit to any other signal beam input/output portion without fail even when there are temperature variations. Also, the number of circuit boards optically connected to the optical bus in the signal beam input/output portions can be changed to a value equal to or less than the maximum number of the signal beam input/output portions, thereby making it possible to construct a system which is resistant to environmental changes and extensible.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US 5,872,869) and Shang as applied to claim 2 and further in view of and Atlas (US 6,295148).

Regarding claim 3, Shimizu et al. teach the multifunction system according to claim 2, but do not teach wherein the plural optical signals of different types are optical signals with different intensity levels.

However, Atlas teaches an optical network for transmitting signals based on intensity levels (column 8, lines 9-12).

Accordingly, it would have been obvious to one skilled in the art to have used the intensity level discrimination transmission system of Atlas in the multifunction system of Shimizu et al., because it allows greater control of signal transmission.

Response to Arguments

5. Applicant's arguments filed 2/28/2006 have been fully considered but they are not persuasive.

With respect to applicant's argument that the Shimizu does not teach to transmit an output signal from reader 500 of first system 1 to the printer 600 of second system 1 through third system 1, has been considered.

In reply: transmit an output signal from reader 500 of first system 1 to the printer 600 of second system 1 through third system 1 is not being relied on in rejecting claim 1 and is not being part of the claimed limitations.

In specific: to transmit an output signal from the image output unit to the first functional unit through the second functional unit is not part of the claimed limitations of claim 1. Please also see page 3, lines 4-11, advisory action mailed on 2/22/2006.

With respect to applicant's argument that Shimizu does not specifically teach or suggest a distribution type optical signal transmission medium, has been considered.

In reply: Note: Shimizu does not use the phrase "distribution type optical signal transmission medium" to describe his optical fiber network.

Shang disclosed that optical fiber network (column 1, lines 10-20) is inherently a "distribution (column 1, line 14, column 1, lines 35-36) type optical signal transmission (column 2, line 53) medium (allow light to go through, column 2, lines 35-40)" or at least it is well known in the art.

Therefore, it would have been obvious to a person with ordinary skill in the art to use the conventional optical fiber network for the system of Shimizu such that Shimizu's system would be properly functioned.

Shimizu does not invent or mention any type of optical fiber network in his invention. Therefore, a user relies on conventional optical fiber network to compliment Shimizu is very reasonable and obvious.

Note: Shang's medium is a transmission type of medium that allows light waves of different/certain wavelengths to pass/propagate through.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 8, 2006

KING Y. POON
PRIMARY EXAMINER